KSC Implementation Plan

Kennedy Space Center Implementing NASA's Strategies

1998

KDP-KSC-S-2000 Rev: Basic 3/98 RELEASED - Printed documents may be obsolete; validate prior to use

The NASA Vision

NASA is an investment in America's future. As explorers, pioneers, and innovators, we boldly expand frontiers in air and space to inspire and serve America and to benefit the quality of life on Earth.

The NASA Strategic Enterprises

Human Exploration and Development of Space

To open the space frontier by exploring, using, and enabling the development of space and to expand the human experience into the far reaches of space.

Space Science

To solve the mysteries of the universe, explore the solar system, discover planets around other stars, search for life beyond Earth - from origins to destiny, chart the evolution of the universe and understand its galaxies, stars, planets, and life.

Earth Science

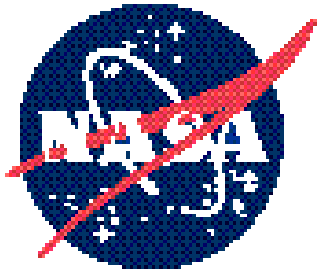
To develop understanding of the total Earth system and the effects of natural and human-induced changes on the global environment.

Aeronautics and Space Transportation Technology

To pioneer the identification, development, verification, transfer, application, and commercialization of high-payoff aeronautics and space transportation technologies.

NASA Values

People • Excellence • Integrity



Message from the Center Director

LIFTOFF AT THE KENNEDY SPACE CENTER! These words inspire people around the world as another space mission begins to explore our limitless universe. Imagine what we can accomplish today and tomorrow standing on the tall shoulders of the pioneers of the space frontier.

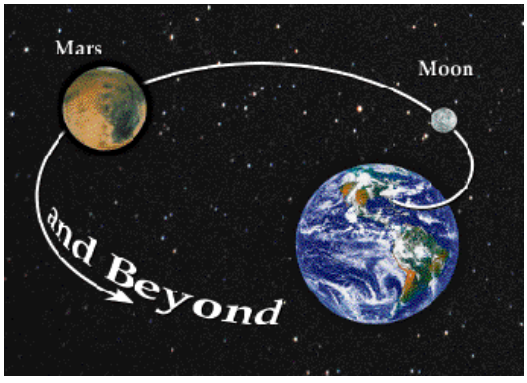
Relying upon the involvement and participation of our workforce, and after extensive consultations with our customers and suppliers, the KSC leadership team developed this Plan. This collaborative effort maximizes our contributions to our customers and helps NASA to advance space exploration and commerce.

This Implementation Plan demonstrates KSC's commitment to NASA, its Enterprises, and our customers. Also we developed Guiding Principles as a foundation for all of our actions. By making our Guiding Principles a way of life, we assure the means we use to reach our goals are most supportive of our customers and in harmony with the needs of our stakeholders. Included as part of this Plan is the initial version of the KSC 25-Year Roadmap. This document identifies specific time-phased strategies which will be implemented through projects to achieve our goals. The Roadmap is a living document which will evolve in response to NASA and customer needs.

We remain committed to focusing our resources on bringing our customers the greatest value in reaching their objectives. This Plan and Roadmap will guide our daily decisions at all levels to assure we all are working to one set of priorities.

Our capabilities and expertise in partnership with our customers and suppliers will enable an effective presence in space and allow for the expansion of knowledge and commerce as we develop the frontiers of the universe.

Roy D. Bridges, Jr.



Guiding Principles

Safety and Health First

- "Success in our Core Business" means we must have the world's best safety and health record in all aspects of our operations.
- Our record is world-class today. Benchmarking the best is revealing strategies which will allow an order of magnitude change in key indicators.
- The health of our workforce, both on and off duty, is crucial to our overall effectiveness.

Build Reliance and Teamwork Everywhere

- Our internal and external team building skills are models to emulate.
- We rely on our partners to provide key products and services which enhance the success of our business.

Satisfy Our Customers' Needs Anytime, Anywhere

- We provide essential services to our customers at competitive prices.
- We engage our customers proactively at the beginning of their design process, anytime, anywhere.
- We enable mission success for our customers while accepting their leadership role.
- We solicit feedback from our customers so that we can continually improve.

Environmental Leadership

- We work in harmony with our environment and are recognized as the best in environmental stewardship.
- We design and implement processes to decrease pollutants and energy usage.

KSC's Agency Assignments

In recognition of the capabilities and experience at KSC, NASA has assigned the following Center of Excellence and accompanying Lead Center responsibilities:

Center of Excellence for Launch and Payload Processing Systems

Lead Center for Acquisition and Management of Expendable Launch Vehicle Services

Lead Center for Payload Carriers, Payload Processing and Support

KSC has numerous other challenging programmatic assignments and NASA support activities. For a complete listing, see our web page at http:/wit.ksc. nasa.gov/BusinessWorld.

KSC'S Future: NASA/Enterprise Links

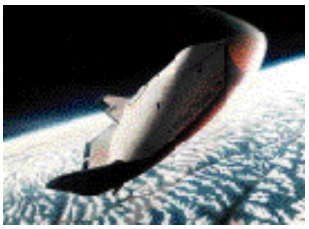
The NASA Strategic Management Process aligns all Agency planning activities. The KSC Implementation Plan is our commitment to align with and implement NASA's plans. Our Plan defines the relationship of strategies from the NASA/ Enterprise Strategic Plans to the Core Business, Center of Excellence, and program specific assignments of KSC. This long-range planning tool will take KSC to the future. It will communicate to our customers that their requirements are being addressed and will ensure that employees understand their contribution to the highest level strategies and objectives of NASA. The final linkage is made through the Business Systems Manual, Center Business Objectives and Agreements, KSC Documented Processes (KDPs), and individual project plans, to employee performance plans.

The KSC Implementation Plan is a living document and will be updated appropriately to reflect current and future NASA/Enterprise strategic direction, as well as KSC implementation of these strategies.

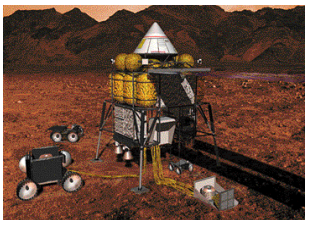
Kennedy Space Center: Center of Excellence for Launch and Payload Processing Systems

KSC is NASA's Center of Excellence for launch and payload processing systems and has specific Lead Center assignments. We will assist the NASA Enterprises in meeting their goals and objectives. Our contribution to the future will focus on four primary goals:

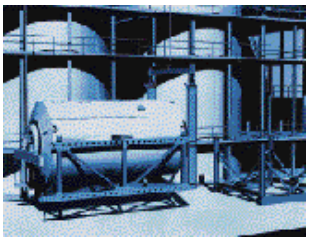
- Assure that sound, safe, and efficient practices and processes are in place for privatized/commercialized launch site processing;



- Increase the use of KSC's operations expertise to contribute to the design and development of new payloads and launch vehicles;



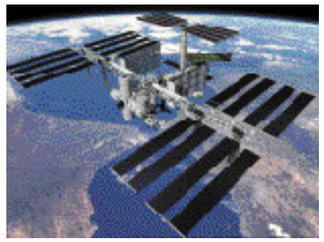
- Utilize KSC's operations expertise in partnership with other entities (Centers, industry, academia) to develop new technologies for future space initiatives;

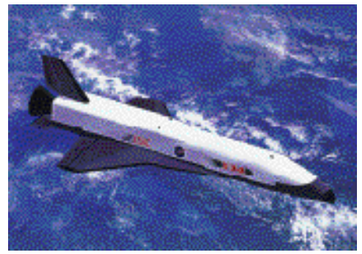


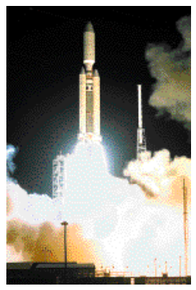
- Continually enhance core capabilities (people, facilities, equipment, and systems) to meet Agency objectives and customer needs for faster, better, cheaper development and operations of space systems.

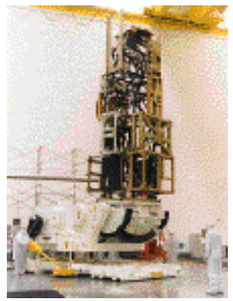
STRATEGIC CORE BUSINESS: We provide space systems processes, test, and launch techniques and develop associated technologies.

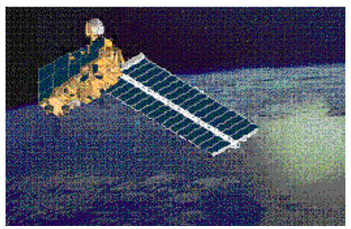
KSC Goals Support the Enterprises Goals & Objectives











KSC Goals

1. Assure sound, safe, and efficient practices are in place for private/commercial processing

2. Increase the use of operational knowledge in the design/development of payloads and new vehicles

3. Partner to develop new technologies for future space initiatives

4. Continually enhance core capabilities to meet customer needs

Human Exploration and Development of Space

Provides safe, affordable human access to space

Use the environment of space to expand scientific knowledge

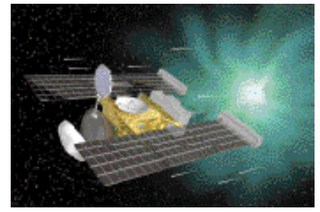
Prepare to conduct human missions of exploration

Earth Science

Expand scientific knowledge by characterizing the Earth system

Aeronautics and Space Transportation Technology

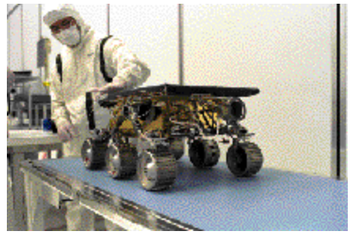
Complete R&D to enable U.S. industry to launch to low-earth orbit at $1,000/lb.



Space Science

Chart the evolution of the Universe

Use robotic missions as forerunners to human exploration beyond low-earth orbit



Reduce Safety Incidents by an order of magnitude

Reduce Criticality 1S failure modes for ground support equipment by 25%

Reduce Shuttle processing hazards by 25%

Contribute to the reduction of operational costs by 15%

Improve quality of products and services for customers

Achieve first ISS Element Launch in mid-1998

KSC Shuttle upgrades contribute to:
• Five-fold reliability improvement
• Doubling the flight rate by 2007

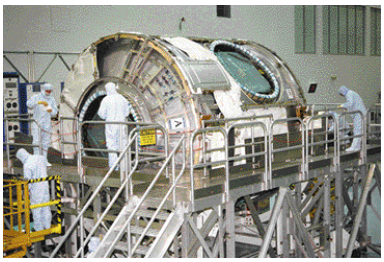
KSC's Goals

GOAL 1: Assure that safe, sound, and efficient practices and processes are in place for privatized/ commercialized launch site processing

The Kennedy Space Center demonstrates its commitment to providing the safest and most cost effective launch and payload processing services possible. Based on its successful launch history, KSC has earned the designation as the NASA Center of Excellence for Launch and Payload Processing systems.

KSC values a safe working environment. Through the implementation of sound safety practices, centered on an aggressive program of education and training and embedding safety accountability in every employee, KSC seeks to continually improve its already impressive safety record.

KSC has taken dramatic steps to lower the cost of Shuttle and ELV processing. By leveraging its considerable experience base, KSC will continue to identify and implement systems and process improvements to lower total costs. KSC is placing a strong emphasis, throughout the entire International Space Station life cycle to ensure flight systems are adequately planned, processed, tested, and verified from manufacturing through launch.

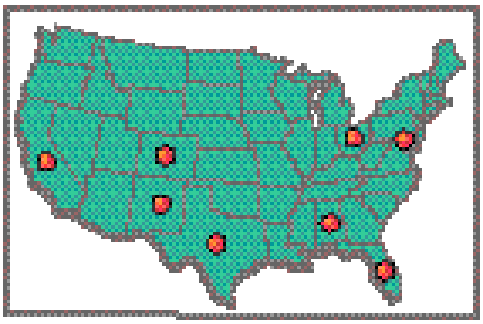


KSC has become an Agency leader in the transitioning of daily processing tasks to its contractor counterparts. This enables employees to commit themselves to the new KSC focus of design and development of upgraded flight and ground systems. At the same time, the innovative application of metrics lays the basis for performance-based management of Shuttle and payload processing while preserving safety and reliability.

STRATEGIC INTENT: KSC is fully committed to remain the world's expert for launch and payload processing. We will pioneer a new partnership between government and industry for the commercialization of space.

GOAL 2: Increase the use of KSC's operational expertise to contribute to the design and development of new payloads and launch vehicles

KSC's demonstrated operational expertise represents a powerful resource for the development of advanced launch and payload processing systems. Through synergistic partnerships with government and industry, KSC focuses an operational perspective not available elsewhere. In support of the development of new cost-effective systems, KSC personnel have been deployed throughout the United States.



KSC plays a pivotal role in the design, development, and planning of payloads destined to expand scientific knowledge, characterize the Earth, explore the role of gravity, and solve the mysteries of the universe. In addition, KSC strives to improve and sharpen its customer focus.

Achieve a 7-day turnaround time between flights for the X-33 program.

Through participation with industry and Agency partners, KSC incorporates an operational perspective into designs to achieve less costly access to space. Both the X-34 and X-33 systems are relying on KSC's proven expertise in the design of cost-effective and flexible future ground processing systems such as interface modules, umbilicals, holddowns, and vehicle positioning systems. Through a partnership with Spaceport Florida Authority, KSC is making fundamental contributions to developing an X-34 facility that has broad future applications. Our cooperation with the USAF 45th Space Wing will improve range safety and telemetry tracking systems.

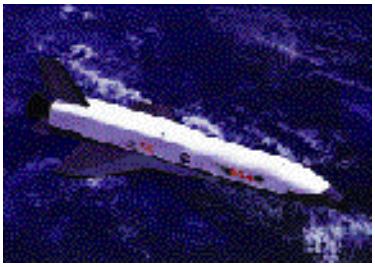
Assist Payload development in reducing cycle time by half

Contribute to lowering the cost of launching payloads from $10K to $IK per pound

Double the application of operational expertise for design and development

Launch thirteen X-34 flights during a 6-month period, one to demonstrate a 24-hour turnaround

STRATEGIC INTENT: Research has indicated that early application of operational knowledge yields a significant payback over a system's deployed lifetime. KSC provides NASA with the operational knowledge necessary to develop the cost-effective launch and payload processing systems that will sustain our nation's Space Program.



GOAL 3: Utilize KSC operational expertise in partnership with other entities (Centers, industry, academia) to develop new technologies for future space initiatives

Reinvest KSC knowledge in developmental engineering

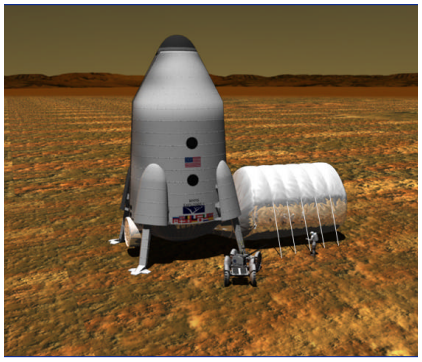
Increase our partnership with other Centers

Contribute expertise to integrating robotic and human missions to Mars

KSC will advance NASA's Moon/Mars initiative to enable the exploration of our Solar System by applying KSC operational experience, resources, and technical expertise. KSC will partner with lead center design agents, Spaceport Florida Authority, and universities in order to achieve important research and technology goals. KSC employees are providing a consistent team interface with JSC/JPL project planners for development activities. By linking advanced technology and research projects with the exploration initiative, KSC will lower costs while assuring the readiness of capabilities to accommodate future requirements. Through communication and education of the KSC workforce, we will expand our contributions to the unfolding plans for future exploration.

KSC will design, prototype and test concepts, capabilities and technologies to be applied to Moon/Mars missions

KSC is actively involved in the implementation of joint Human Exploration and Development of Space and Space Science Enterprise plans for an integrated program of robotic exploration of Mars. KSC is supporting development efforts such as: sample return, Mars ascent, and technology demonstration vehicles; corrosion detection and control; autonomous systems; and In Situ Resource Utilization technologies, which include production, handling, and storage of cryogens; and other development efforts in which KSC applies its expertise.



KSC-developed technologies will enable future processing activities on the surface of Mars:

- *Magnetic coupled cryogenic pumps*
- *Knowledge-Based Autonomous Testing*
- *Health diagnostics*
- *Advanced, remote leak detection*
- *Cryogenic couplings, fasteners and QDs*
- *Bioregenerative life support*

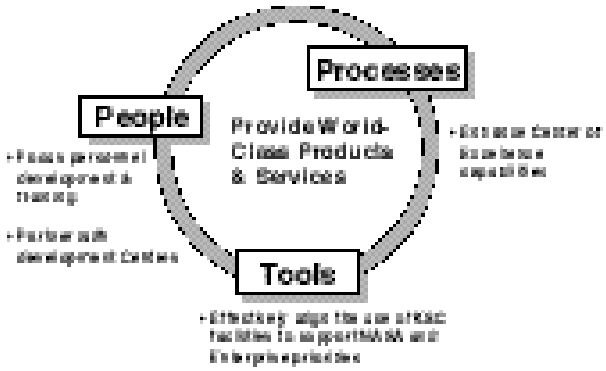
STRATEGIC INTENT: Our capabilities and expertise in partnership with our customers and suppliers open the gateway to the universe.

GOAL 4: Continually enhance core capabilities (people, facilities, equipment and systems) to meet NASA objectives and customer needs for faster, better, cheaper development and operations of space systems

The Kennedy Space Center and its proven capabilities are an integral part of NASA's success. To continue as a preeminent partner in our nation's space exploration efforts and initiatives, KSC will meet its customers' needs and objectives 100% of the time, anytime, anywhere. KSC will define the industry standard of excellence through the application of benchmarking and continual improvement techniques.

We are dedicated to providing a level of expertise that is unsurpassed in the industry and providing facilities and systems that satisfy multi-program integration and processing requirements. One strategic focus includes the consolidation and joint management of base operating contracts with our Air Force partners. Our commitment to excellence and enhanced capabilities will include a conscientious stewardship to the environment.

Through the reinvention of our enabling business processes, establishment of a single government interface, and creation of a "one-stop" launch servicing capability for our customers, we will meet the goals and objectives of the Human Exploration and Development of Space, Earth Science, Space Science, and Aeronautics and Space Transportation Technology Enterprises.



KSC will utilize its people and technologies to educate the public and private sector on the benefits of space initiatives and the contributions of NASA and the Kennedy Space Center.

Improved customer satisfaction for payload processing

Partner with the Air Force to enhance base support capabilities and to reduce cost by 20%

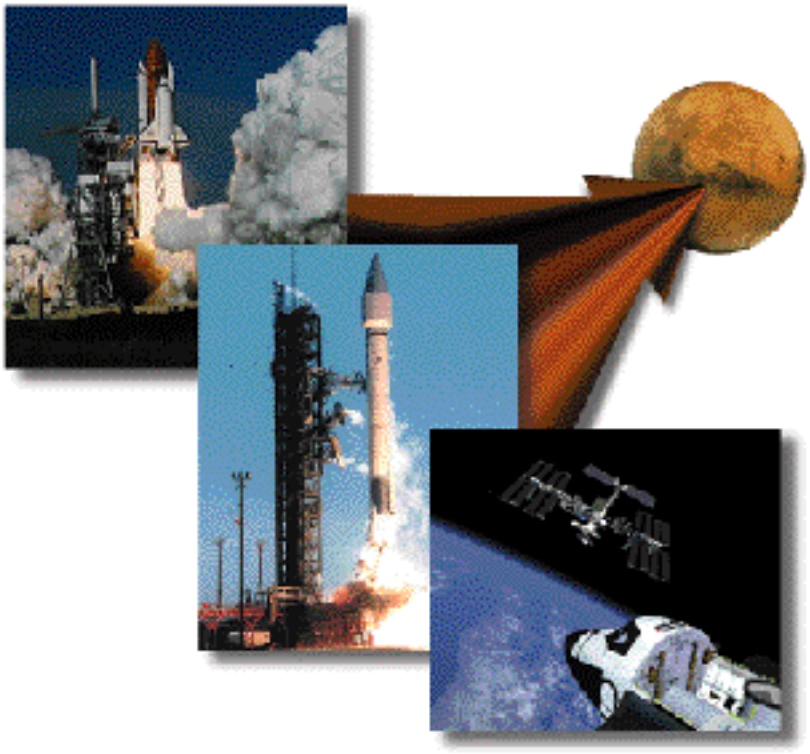
Double the number of technology publications by KSC employees

Aggressively reduce non-recyclable waste by 40%

Ongoing ISO certification beginning in 1998

STRATEGIC INTENT: KSC's future depends on bringing the most value to where the Agency and our customers are going.

Our future success hinges upon...



our performance today and everyday.

Enclosed is a copy of the Roadmap KSC is following to reach its goals. One of the four goals is shown in the shaded area at the top of each page. The objectives and strategies pertaining to that goal are shown in near-term, mid-term, and long-term timeframes that correspond to the Agency Roadmap. For a current copy of the Roadmap, see our web page at http://wit.ksc.nasa.gov/BusinessWorld.

The Beginning...

National Aeronautics and
Space Administration
John F. Kennedy Space Center

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